## WHAT IS CLAIMED IS:

## 1. A compound of formula I:

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$$R^{2}$$
 $R^{3}$ 
 $R^{4}$ 
 $R^{5}$ 

10 wherein

R<sup>1</sup> is selected from the group consisting of alkoxy, alkaryloxy, alkeycloalkoxy, aryloxy, and cycloalkoxy;

 $R^2$  is selected from the group consisting of hydrogen, alkoxy, alkcycloalkoxy, cycloalkoxy and halogen, or when  $R^1$  and  $R^2$  are attached to adjacent carbon atoms,  $R^1$  and  $R^2$  may be joined together to form an alkylenedioxy group;

R<sup>3</sup> is selected from the group consisting of hydrogen, alkoxy, alkeycloalkoxy, cycloalkoxy and halogen;

R<sup>4</sup> is selected from the group consisting of hydrogen and alkyl;

R<sup>5</sup> is selected from the group consisting of alkyl having at least 3 carbon atoms, substituted alkyl having at least 3 carbon atoms and cycloalkyl; provided that:

- (i) when  $R^2$  and  $R^3$  are independently hydrogen or methoxy,  $R^1$  is not methoxy;
- (ii) when  $R^2$ ,  $R^3$  and  $R^4$  are hydrogen and  $R^5$  is *tert*-butyl, then  $R^1$  is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;
- (iii) when  $R^2$ ,  $R^3$  and  $R^4$  are hydrogen and  $R^5$  is isopropyl, then  $R^1$  is not 4-ethoxy;
- (iv) when R<sup>1</sup> and R<sup>2</sup> are joined together to form a 3,4-methylenedioxy group and R<sup>3</sup> and R<sup>4</sup> are hydrogen, then R<sup>5</sup> is not isopropyl or *tert*-butyl;

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- (v) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is 1-hydroxy-2-methylprop-2-yl, then R<sup>1</sup> is not 2-ethoxy;
- (vi) when R<sup>1</sup> is 4-methoxy, R<sup>2</sup> is 3-ethoxy, and R<sup>3</sup> and R<sup>4</sup> are hydrogen, then R<sup>5</sup> is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and
- (vii) when R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-methoxy when R<sup>2</sup> is 2-fluoro, and R<sup>1</sup> is not 2-methoxy when R<sup>2</sup> is 4-fluoro.
  - 2. The compound according to Claim 1 wherein R<sup>4</sup> is hydrogen.
- 3. The compound according to Claim 2 wherein R³ is selected from the group consisting of hydrogen and alkoxy.
- 4. The compound according to Claim 3 wherein R<sup>2</sup> is selected from the group consisting of hydrogen, alkoxy and fluoro.
- 5. The compound according to Claim 4 wherein R<sup>1</sup> is selected from the group consisting of alkoxy, alkaryloxy and cycloalkoxy.
- 6. The compound according to Claim 4 wherein R<sup>1</sup> and R<sup>2</sup> are joined together to form an alkylenedioxy group.
  - 7. The compound according to Claim 5 or 6 wherein R<sup>5</sup> is selected from the group consisting of alkyl having 3 to about 8 carbon atoms and cycloalkyl having 3 to about 10 carbon atoms.
  - 8. The compound according to Claim 7 wherein R<sup>5</sup> is selected from the group consisting of *n*-propyl, isopropyl, 1-methoxy2-methylproo-2-yl, *n*-butyl, but-2-yl, *tert*-butyl, 2-methylbut-2-yl, 3-methylbut-1-yl, 3,3-dimethylbut-2-yl, 4-methylpent-2-yl, 2,4-dimethyl-2-pentyl, 2,2,4,4-tetramethylpent-3-yl,

cyclopropyl, cyclobutyl, *tert*-octyl, cyclopentyl, cyclohexyl, cyclooctyl, 1-adamantyl, 2-adamantyl, 3,5-dimethyl-1-adamantyl and benzyl.

## 9. A compound of formula II:

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wherein

R<sup>6</sup> is selected from the group consisting of alkoxy having 1 to 8 carbon atoms, alkaryloxy having 7 to 10 carbon atoms and aryloxy having 6 to 10 carbon atoms;

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R<sup>7</sup> is selected from the group consisting of alkoxy having 1 to 8 carbon atoms and fluoro, or when R<sup>6</sup> and R<sup>7</sup> are attached to adjacent carbon atoms, R<sup>6</sup> and R<sup>7</sup> may be joined together to form an alkylenedioxy group having 1 to about 6 carbon atoms;

R<sup>8</sup> is selected from the group consisting of hydrogen and alkoxy having 1 to 8 carbon atoms; and

to 8 carbon atoms; and

R<sup>9</sup> is selected from the group consisting of alkyl having 3 to about 8 carbon atoms, substituted alkyl having 3 to about 8 carbon atoms and cycloalkyl having 3 to about 10 carbon atoms;

## provided that:

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- (i) when  $R^7$  is methoxy and  $R^8$  is hydrogen or methoxy,  $R^6$  is not methoxy;
- (ii) when R<sup>6</sup> and R<sup>7</sup> are joined together to form a 3,4-methylenedioxy group and R<sup>8</sup> is hydrogen, then R<sup>9</sup> is not isopropyl or *tert*-butyl; and
- (iii) when R<sup>6</sup> is 4-methoxy, R<sup>7</sup> is 3-ethoxy and R<sup>8</sup> is hydrogen, then R<sup>9</sup> is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl.

10. The compound according to Claim 9 wherein  $R^6$  is alkoxy having 1 to 8 carbon atoms,  $R^7$  is alkoxy having 2 to 8 carbon atoms and  $R^8$  is hydrogen.

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- 11. The compound according to Claim 10 wherein  $R^6$  is methoxy,  $R^7$  is ethoxy and  $R^8$  is hydrogen.
- 12. The compound according to Claim 9 wherein R<sup>6</sup> is ethoxy; and R<sup>7</sup> and R<sup>8</sup> are hydrogen.
  - 13. The compound according to Claim 9 wherein R<sup>6</sup> is benzyloxy, R<sup>7</sup> is alkoxy having 1 to 8 carbon atoms, and R<sup>8</sup> is hydrogen.

15 14. The compound according to Claim 9 wherein R<sup>6</sup> is benzyloxy; and R<sup>7</sup> and R<sup>8</sup> are hydrogen.

15. The compound according to Claim 9 wherein  $R^6$  is alkoxy having 1 to 8 carbon atoms,  $R^7$  is fluoro and  $R^8$  is hydrogen.

- 16. The compound according to Claim 9 wherein R<sup>6</sup> and R<sup>7</sup> are joined together to form a methylenedioxy or ethylenedioxy group and R<sup>8</sup> is hydrogen.
- 17. The compound according to Claim 9 wherein R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup> are each independently alkoxy having 2 to 8 carbon atoms.
  - 18. A compound selected from the group consisting of:
  - $\alpha$ -(4-heptyloxyphenyl)-*N-tert*-butylnitrone
  - $\alpha$ -(4-hexyloxyphenyl)-N-n-propylnitrone
- 30  $\alpha$ -(3-ethoxy-4-methoxyphenyl)-*N-tert*-butylnitrone

	$\alpha$ -(4-ethoxyphenyl)- <i>N-tert</i> -butylnitrone
	$\alpha$ -(4-benzyloxy-3-methoxyphenyl)- $N$ -tert-butylnitrone
	$\alpha$ -[3-(4-methoxyphenoxy)phenyl]- <i>N-tert</i> -butylnitrone
	α-(2-ethoxyphenyl)- <i>N-tert</i> -butylnitrone
5	$\alpha$ -(3,4-ethylenedioxyphenyl)- <i>N-tert</i> -butylnitrone
	$\alpha$ -(3,4-methylenedioxyphenyl)- <i>N-tert</i> -butylnitrone
	α-(4-ethoxyphenyl)-N-cyclohexylnitrone
	$\alpha$ -(4-benzyloxy-3-methoxyphenyl)- $N$ -cyclohexylnitrone
	$\alpha$ -(3-ethoxy-4-methoxyphenyl)- $N$ -cyclohexylnitrone
10	$\alpha$ -(3,4-ethylenedioxyphenyl)- $N$ -cyclohexylnitrone
	$\alpha$ -(4-ethoxy-3-methoxyphenyl)- $N$ -cyclohexylnitrone
	$\alpha$ -(3,4-ethylenedioxyphenyl)- $N$ -isopropylnitrone
	$\alpha$ -(3-ethoxy-4-methoxyphenyl)- $N$ -isopropylnitrone
	α-(2-ethoxyphenyl)-N-isopropylnitrone
15	$\alpha$ -(2-ethoxyphenyl)- $N$ -cyclohexylnitrone
	$\alpha$ -(4-benzyloxy-3-methoxyphenyl)- $N$ -isopropylnitrone
14+*** F	α-(4-ethoxy-3-methoxyphenyl)-N-isopropylnitrone
	$\alpha$ -(3-ethoxy-4-hexyloxyphenyl)- $N$ -cyclohexylnitrone
	$\alpha$ -(4-benzyloxy-3-methoxyphenyl)- $N$ - $n$ -butylnitrone
20	$\alpha$ -(4-ethoxy-3-methoxyphenyl)- $N$ - $n$ -butylnitrone
	$\alpha$ -(2-ethoxyphenyl)- $N$ - $n$ -butylnitrone
	$\alpha$ -(3-ethoxy-4-methoxyphenyl)- $N$ - $n$ -butylnitrone
	$\alpha$ -(3-ethoxy-4-hexyloxyphenyl)- $N$ -isopropylnitrone
	$\alpha$ -(3-ethoxy-4-hexyloxyphenyl)- <i>N-tert</i> -butylnitrone
25	α-(2-fluoro-4-octyloxyphenyl)- <i>N-tert</i> -butylnitrone
•	$\alpha$ -(2,4,6-triethoxyphenyl)- <i>N-tert</i> -butylnitrone
· · · · · · · · · · · · · · · · · · ·	$\alpha$ -(2,4,6-triethoxyphenyl)- $N$ -cyclohexylnitrone
	$\alpha$ -(2- <i>n</i> -butoxyphenyl)- <i>N</i> -tert-butylnitrone
	$\alpha$ -(3,4-diethoxyphenyl)- <i>N-tert</i> -butylnitrone
30	α-(2-fluoro-4-heptyloxyphenyl)- <i>N-tert</i> -butylnitrone

e e	$\alpha$ -(2-fluoro-4-ethoxyphenyl)- $N$ -tert-butylnitrone
,	α-(2-fluoro-4-ethoxyphenyl)-N-cyclohexylnitrone
	α-(2-ethoxyphenyl)- <i>N</i> -adamantylnitrone
:	$\alpha$ -(3-ethoxy-4-methoxyphenyl)- $N$ -adamantylnitrone
.5	α-(4-ethoxyphenyl)-N-cyclopentylnitrone
	$\alpha$ -(4-ethoxyphenyl)- <i>N-tert</i> -octylnitrone
	$\alpha$ -(4-benzyloxyphenyl)- $N$ -tert-butylnitrone
	$\alpha$ -(4-benzyloxyphenyl)- $N$ -cyclopentylnitrone
	$\alpha$ -(4-benzyloxyphenyl)- $N$ -cyclohexylnitrone
10	α-(2-ethoxyphenyl)-N-cyclopentylnitrone
	$\alpha$ -(3-ethoxy-4-methoxyphenyl)- <i>N-tert</i> -octylnitrone
	$\alpha$ -(3-ethoxy-4-methoxyphenyl)- $N$ -(2,4-dimethyl-2-pentyl)nitrone
	$\alpha$ -(4-ethoxyphenyl)- $N$ - $n$ -butylnitrone
	α-(2-ethoxyphenyl)-N-benzylnitrone
15	$\alpha\hbox{-}(3\hbox{-ethoxy-}4\hbox{-methoxyphenyl})\hbox{-}\textit{N}\hbox{-}(2,2,4,4\hbox{-tetramethylpent-}3\hbox{-yl}) nitrone$
	$\alpha$ -(3-ethoxy-4-methoxyphenyl)- $N$ -(4-methylpent-2-yl)nitrone
en Marian Marian	$\alpha$ -(3-ethoxy-4-methoxyphenyl)- $N$ -but-2-ylnitrone
	α-(2-ethoxyphenyl)- <i>N</i> -but-2-ylnitrone
	α-[4-(4-fluorobenzyloxy)phenyl]- <i>N-tert</i> -butylnitrone
20	$\alpha$ -(3-ethoxy-4-methoxyphenyl)- $N$ -cyclopentylnitrone
*	$\alpha$ -(3-ethoxy-4-methoxyphenyl)- $N$ - $n$ -propylnitrone
	$\alpha$ -(4-benzyloxyphenyl)- $N$ - $n$ -propylnitrone
	$\alpha$ -(4-benzyloxyphenyl)- $N$ -isopropylnitrone
	$\alpha$ -(3-ethoxy-4-methoxyphenyl)- $N$ -(2-methylbut-2-yl)nitrone
25	$\alpha$ -(2-ethoxyphenyl)- $N$ -(2-methylbut-2-yl)nitrone
	α-(3-ethoxy-4-methoxyphenyl)-N-cyclooctylnitrone
	$\alpha$ -(2-ethoxyphenyl)- $N$ -cyclobutylnitrone
	$\alpha$ -(3-ethoxy-4-methoxyphenyl)- $N$ -cyclobutylnitrone
	$\alpha$ -(4-benzyloxyphenyl)- $N$ -cyclobutylnitrone
30	α-(4-benzyloxyphenyl)- <i>N-tert</i> -octylnitrone

	α-[4	-(4-fluorobenzyloxy)phenyl]-N-cyclohexylnitrone
	α-(2	-ethoxyphenyl)-N-tert-octylnitrone
	α-[4	-(4-fluorobenzyloxy)phenyl]-N-isopropylnitrone
	α-(2	-ethoxyphenyl)-N-cyclooctylnitrone
5	α-(4-	-benzyloxyphenyl)-N-cyclopropylnitrone
	α-(3-	-ethoxy-4-methoxyphenyl)-N-cyclopropylnitrone
•	α-(4-	-benzyloxyphenyl)-N-cyclooctylnitrone
Service → Control	α-(3-	ethoxy-4-methoxyphenyl)-N-(3,5-dimethyl-1-adamantyl)nitrone
	α-(4-	benzyloxyphenyl)-N-1-adamantylnitrone
10	α-(3-	ethoxy-4-methoxyphenyl)-N-(1-methoxy-2-methylprop-2-yl)nitrone
	α-(4-	benzyloxyphenyl)-N-2-adamantylnitrone
•	α-(4-	ethoxyphenyl)-N-cyclooctylnitrone
	α-(4-	ethoxyphenyl)-N-1-adamantylnitrone
	α-[4-	(4-methoxybenzyloxy)phenyl]-N-tert-butylnitrone
15	α-(3-	ethoxy-4-methoxyphenyl)-N-(3-methylbut-1-yl)nitrone
	α-(3-	ethoxy-4-methoxyphenyl)-N-cyclooctylnitrone, and
3+ 05   1+ 1=	α-[4-	(4-fluorobenzyloxy)phenyl]-N-cyclopentylnitrone.
•		
	19.	$\alpha$ -(2-Ethoxyphenyl)- <i>N-tert</i> -butylnitrone.
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	20.	$\alpha$ -(2-Ethoxyphenyl)- $N$ -cyclohexylnitrone.
V.		
	21.	$\alpha$ -(4-Ethoxyphenyl)- $N$ -cyclohexylnitrone.
25	22.	$\alpha$ -(4-Benzyloxyphenyl)- <i>N-tert</i> -butylnitrone.
		•
1, 2	23.	$\alpha$ -(4-Benzyloxyphenyl)- $N$ -cyclopentylnitrone.
	24.	$\alpha$ -(3-Ethoxy-4-methoxyphenyl)- $N$ -adamantylnitrone.

- 25.  $\alpha$ -(3-Ethoxy-4-methoxyphenyl)-*N-tert*-octylnitrone.
- 26. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a pharmaceutically effective amount of a compound of formula I:

$$R^{1}$$
 $R^{2}$ 
 $R^{3}$ 
 $R^{4}$ 
 $R^{5}$ 
 $R^{5}$ 

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wherein

R<sup>1</sup> is selected from the group consisting of alkoxy, alkaryloxy, alkcycloalkoxy, aryloxy, and cycloalkoxy;

 $R^2$  is selected from the group consisting of hydrogen, alkoxy, alkeycloalkoxy, cycloalkoxy and halogen, or when  $R^1$  and  $R^2$  are attached to adjacent carbon atoms,  $R^1$  and  $R^2$  may be joined together to form an alkylenedioxy group;

20 R³ is selected from the group consisting of hydrogen, alkoxy, alkcycloalkoxy, cycloalkoxy and halogen;

R<sup>4</sup> is selected from the group consisting of hydrogen and alkyl;

R<sup>5</sup> is selected from the group consisting of alkyl having at least 3 carbon atoms, alkeycloalkyl and cycloalkyl;

provided that:

- (i) when  $R^2$  and  $R^3$  are independently hydrogen or methoxy,  $R^1$  is not methoxy;
- (ii) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;

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- (iii) when  $R^2$ ,  $R^3$  and  $R^4$  are hydrogen and  $R^5$  is isopropyl, then  $R^1$  is not 4-ethoxy;
- (iv) when R<sup>1</sup> and R<sup>2</sup> are joined together to form a 3,4-methylenedioxy group and R<sup>3</sup> and R<sup>4</sup> are hydrogen, then R<sup>5</sup> is not isopropyl or *tert*-butyl;
- (v) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is 1-hydroxy-2-methylprop-2-yl, then R<sup>1</sup> is not 2-ethoxy;
- (vi) when R<sup>1</sup> is 4-methoxy, R<sup>2</sup> is 3-ethoxy, and R<sup>3</sup> and R<sup>4</sup> are hydrogen, then R<sup>5</sup> is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and
- (vii) when R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-methoxy when R<sup>2</sup> is 2-fluoro, and R<sup>1</sup> is not 2-methoxy when R<sup>2</sup> is 4-fluoro.
- 28. The pharmaceutical composition according to Claim 27 wherein  $R^3$  is selected from the group consisting of hydrogen and alkoxy.
- 29. The pharmaceutical composition according to Claim 28 wherein  $R^2$  is selected from the group consisting of hydrogen, alkoxy and fluoro.
- 30. The pharmaceutical composition according to Claim 29 wherein R<sup>1</sup> is selected from the group consisting of alkoxy, alkaryloxy and cycloalkoxy.
- 31. The pharmaceutical composition according to Claim 29 wherein R<sup>1</sup> and R<sup>2</sup> are joined together to form an alkylenedioxy group.
  - 32. The pharmaceutical composition according to Claim 30 or 31 wherein R<sup>5</sup> is selected from the group consisting of alkyl having 3 to about 8 carbon atoms and cycloalkyl having 3 to about 8 carbon atoms.

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- 33. The pharmaceutical composition according to Claim 32 wherein R<sup>5</sup> is selected from the group consisting of *n*-propyl, isopropyl, 1-methoxy2-methylproo-2-yl, *n*-butyl, but-2-yl, *tert*-butyl, 2-methylbut-2-yl, 3-methylbut-1-yl, 3,3-dimethylbut-2-yl, 4-methylpent-2-yl, 2,4-dimethyl-2-pentyl, 2,2,4,4-tetramethylpent-3-yl, cyclopropyl, cyclobutyl, *tert*-octyl, cyclopentyl, cyclohexyl, cyclooctyl, 1-adamantyl, 2-adamantyl, 3,5-dimethyl-1-adamantyl and benzyl.
- 34. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a pharmaceutically effective amount of formula II:

$$R^{6}$$
 $R^{7}$ 
 $R^{8}$ 
 $R^{9}$ 
 $R^{9}$ 

wherein

R<sup>6</sup> is selected from the group consisting of alkoxy having 1 to 8 carbon atoms, alkaryloxy having 7 to 10 carbon atoms and aryloxy having 6 to 10 carbon atoms;

R<sup>7</sup> is selected from the group consisting of alkoxy having 1 to 8 carbon atoms and fluoro, or when R<sup>6</sup> and R<sup>7</sup> are attached to adjacent carbon atoms, R<sup>6</sup> and R<sup>7</sup> may be joined together to form an alkylenedioxy group having 1 to about 6 carbon atoms;

R<sup>8</sup> is selected from the group consisting of hydrogen and alkoxy having 1 to 8 carbon atoms; and

R<sup>9</sup> is selected from the group consisting of alkyl having 3 to about 8 carbon atoms, substituted alkyl having 3 to about 8 carbon atoms and cycloalkyl having 3 to about 10 carbon atoms;

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provided that:

- (i) when  $R^7$  is methoxy and  $R^8$  is hydrogen or methoxy,  $R^6$  is not methoxy;
- (ii) when R<sup>6</sup> and R<sup>7</sup> are joined together to form a 3,4-methylenedioxy group and R<sup>8</sup> is hydrogen, then R<sup>9</sup> is not isopropyl or *tert*-butyl; and
- (iii) when R<sup>6</sup> is 4-methoxy, R<sup>7</sup> is 3-ethoxy and R<sup>8</sup> is hydrogen, then R<sup>9</sup> is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl.
- 35. The pharmaceutical composition according to Claim 34 wherein R<sup>6</sup> is alkoxy having 1 to 8 carbon atoms, R<sup>7</sup> is alkoxy having 2 to 8 carbon atoms and R<sup>8</sup> is hydrogen.
  - 36. The pharmaceutical composition according to Claim 35 wherein R<sup>6</sup> is methoxy, R<sup>7</sup> is ethoxy and R<sup>8</sup> is hydrogen.
  - 37. The pharmaceutical composition according to Claim 34 wherein  $R^6$  is benzyloxy, 4-fluorobenzyloxy or 4-methoxybenzyloxy and  $R^7$  and  $R^8$  are hydrogen.
- 20 38. The pharmaceutical composition according to Claim 34 wherein  $R^6$  is ethoxy and  $R^7$  and  $R^8$  are hydrogen.
  - 39. The pharmaceutical composition according to Claim 34 wherein R<sup>6</sup> is alkoxy having 1 to 8 carbon atoms, R<sup>7</sup> is fluoro and R<sup>8</sup> is hydrogen.
  - 40. The pharmaceutical composition according to Claim 34 wherein  $R^6$  and  $R^7$  are joined together to form a methylenedioxy or ethylenedioxy group and  $R^8$  is hydrogen.

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- 41. The pharmaceutical composition according to Claim 34 wherein  $R^6$ ,  $R^7$  and  $R^8$  are each independently alkoxy having 2 to 8 carbon atoms.
- 42. The pharmaceutical composition according to Claim 26 or 34 wherein the carrier is an oral carrier.
- 43. The pharmaceutical composition according to Claim 26 or 34 wherein the carrier is an injectable carrier.
- 44. A method for treating a patient with a neurodegenerative disease which method comprises administering to said patient a pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective neurodegenerative disease-treating amount of a compound of formula I:

$$R^{1}$$
 $R^{2}$ 
 $N$ 
 $R^{5}$ 
 $R^{4}$ 

20 wherein

R<sup>1</sup> is selected from the group consisting of alkoxy, alkaryloxy, alkcycloalkoxy, aryloxy, and cycloalkoxy;

R<sup>2</sup> is selected from the group consisting of hydrogen, alkoxy, alkcycloalkoxy, cycloalkoxy and halogen, or when R<sup>1</sup> and R<sup>2</sup> are attached to adjacent carbon atoms, R<sup>1</sup> and R<sup>2</sup> may be joined together to form an alkylenedioxy group;

R<sup>3</sup> is selected from the group consisting of hydrogen, alkoxy, alkcycloalkoxy, cycloalkoxy and halogen;

R<sup>4</sup> is selected from the group consisting of hydrogen and alkyl;

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R<sup>5</sup> is selected from the group consisting of alkyl having at least 3 carbon atoms, substitututed alkyl having at least 3 carbon atoms and cycloalkyl; provided that:

- (i) when  $R^2$  and  $R^3$  are independently hydrogen or methoxy,  $R^1$  is not methoxy;
- (ii) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;
- (iii) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is isopropyl, then R<sup>1</sup> is not 4-ethoxy;
- (iv) when  $R^1$  and  $R^2$  are joined together to form a 3,4-methylenedioxy group and  $R^3$  and  $R^4$  are hydrogen, then  $R^5$  is not isopropyl or *tert*-butyl;
- (v) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is 1-hydroxy-2-methylprop-2-yl, then R<sup>1</sup> is not 2-ethoxy;
- (vi) when R<sup>1</sup> is 4-methoxy, R<sup>2</sup> is 3-ethoxy, and R<sup>3</sup> and R<sup>4</sup> are hydrogen, then R<sup>5</sup> is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and
- (vii) when R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-methoxy when R<sup>2</sup> is 2-fluoro, and R<sup>1</sup> is not 2-methoxy when R<sup>2</sup> is 4-fluoro.
- 45. A method for preventing the onset of a neurodegenerative disease in a patient at risk for developing the neurodegenerative disease which method comprises administering to said patient a pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective neurodegenerative disease-preventing amount of a compound of formula I:

30 wherein

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R<sup>1</sup> is selected from the group consisting of alkoxy, alkaryloxy, alkcycloalkoxy, aryloxy, and cycloalkoxy;

R<sup>2</sup> is selected from the group consisting of hydrogen, alkoxy, alkcycloalkoxy, cycloalkoxy and halogen, or when R<sup>1</sup> and R<sup>2</sup> are attached to adjacent carbon atoms, R<sup>1</sup> and R<sup>2</sup> may be joined together to form an alkylenedioxy group;

R<sup>3</sup> is selected from the group consisting of hydrogen, alkoxy, alkcycloalkoxy, cycloalkoxy and halogen;

R<sup>4</sup> is selected from the group consisting of hydrogen and alkyl;

R<sup>5</sup> is selected from the group consisting of alkyl having at least 3 carbon atoms, substitututed alkyl having at least 3 carbon atoms and cycloalkyl; provided that:

- (i) when  $R^2$  and  $R^3$  are independently hydrogen or methoxy,  $R^1$  is not methoxy;
- (ii) when  $R^2$ ,  $R^3$  and  $R^4$  are hydrogen and  $R^5$  is *tert*-butyl, then  $R^1$  is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;
- (iii) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is isopropyl, then R<sup>1</sup> is not 4-ethoxy;
- (iv) when R<sup>1</sup> and R<sup>2</sup> are joined together to form a 3,4-methylenedioxy group and R<sup>3</sup> and R<sup>4</sup> are hydrogen, then R<sup>5</sup> is not isopropyl or *tert*-butyl;
- (v) when  $R^2$ ,  $R^3$  and  $R^4$  are hydrogen and  $R^5$  is 1-hydroxy-2-methylprop-2-yl, then  $R^1$  is not 2-ethoxy;
- (vi) when  $R^1$  is 4-methoxy,  $R^2$  is 3-ethoxy, and  $R^3$  and  $R^4$  are hydrogen, then  $R^5$  is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and
- (vii) when R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-methoxy when R<sup>2</sup> is 2-fluoro, and R<sup>1</sup> is not 2-methoxy when R<sup>2</sup> is 4-fluoro.
- 46. The method according to Claim 44 or 45 wherein the neurodegenerative disease is Alzheimer's disease.

- 47. The method according to Claim 44 or 45 wherein the neurodegenerative disease is Parkinson's disease.
- 48. The method according to Claim 44 or 45 wherein the neurodegenerative disease is HIV dementia.
  - 49. A method for treating a patient with an autoimmune disease which method comprises administering to said patient a pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective autoimmune disease-treating amount of a compound of formula I:

$$R^{1}$$
 $R^{2}$ 
 $R^{2}$ 
 $R^{3}$ 
 $R^{4}$ 
 $R^{5}$ 

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wherein

 $R^1$  is selected from the group consisting of alkoxy, alkaryloxy, alkcycloalkoxy, aryloxy, and cycloalkoxy;

R<sup>2</sup> is selected from the group consisting of hydrogen, alkoxy, alkcycloalkoxy, cycloalkoxy and halogen, or when R<sup>1</sup> and R<sup>2</sup> are attached to adjacent carbon atoms, R<sup>1</sup> and R<sup>2</sup> may be joined together to form an alkylenedioxy group;

R<sup>3</sup> is selected from the group consisting of hydrogen, alkoxy, alkcycloalkoxy, cycloalkoxy and halogen;

R<sup>4</sup> is selected from the group consisting of hydrogen and alkyl;

R<sup>5</sup> is selected from the group consisting of alkyl having at least 3 carbon atoms, substitututed alkyl having at least 3 carbon atoms and cycloalkyl;

provided that:

- (i) when  $R^2$  and  $R^3$  are independently hydrogen or methoxy,  $R^1$  is not methoxy;
- (ii) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;
- (iii) when  $R^2$ ,  $R^3$  and  $R^4$  are hydrogen and  $R^5$  is isopropyl, then  $R^1$  is not 4-ethoxy;
- (iv) when R<sup>1</sup> and R<sup>2</sup> are joined together to form a 3,4-methylenedioxy group and R<sup>3</sup> and R<sup>4</sup> are hydrogen, then R<sup>5</sup> is not isopropyl or *tert*-butyl;
- (v) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is 1-hydroxy-2-methylprop-2-yl, then R<sup>1</sup> is not 2-ethoxy;
- (vi) when R<sup>1</sup> is 4-methoxy, R<sup>2</sup> is 3-ethoxy, and R<sup>3</sup> and R<sup>4</sup> are hydrogen, then R<sup>5</sup> is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and
- (vii) when R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-methoxy when R<sup>2</sup> is 2-fluoro, and R<sup>1</sup> is not 2-methoxy when R<sup>2</sup> is 4-fluoro.
- 50. A method for preventing the onset of an autoimmune disease in a patient at risk for developing the autoimmune disease which method comprises administering to said patient a pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective autoimmune disease-preventing amount of a compound of formula I:

$$R^{1}$$
 $R^{2}$ 
 $R^{3}$ 
 $R^{4}$ 
 $R^{5}$ 

wherein

R<sup>1</sup> is selected from the group consisting of alkoxy, alkaryloxy, alkcycloalkoxy, aryloxy, and cycloalkoxy;

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 $R^2$  is selected from the group consisting of hydrogen, alkoxy, alkeycloalkoxy, cycloalkoxy and halogen, or when  $R^1$  and  $R^2$  are attached to adjacent carbon atoms,  $R^1$  and  $R^2$  may be joined together to form an alkylenedioxy group;

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R<sup>3</sup> is selected from the group consisting of hydrogen, alkoxy, alkcycloalkoxy, cycloalkoxy and halogen;

R<sup>4</sup> is selected from the group consisting of hydrogen and alkyl;

R<sup>5</sup> is selected from the group consisting of alkyl having at least 3 carbon atoms, substitututed alkyl having at least 3 carbon atoms and cycloalkyl;

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provided that:

- (i) when  $R^2$  and  $R^3$  are independently hydrogen or methoxy,  $R^1$  is not methoxy;
- (ii) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;

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(iii) when  $R^2$ ,  $R^3$  and  $R^4$  are hydrogen and  $R^5$  is isopropyl, then  $R^1$  is not 4-ethoxy;

- (iv) when R<sup>1</sup> and R<sup>2</sup> are joined together to form a 3,4-methylenedioxy group and R<sup>3</sup> and R<sup>4</sup> are hydrogen, then R<sup>5</sup> is not isopropyl or *tert*-butyl;
- (v) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is 1-hydroxy-2-methylprop-2-yl, then R<sup>1</sup> is not 2-ethoxy;
- (vi) when R<sup>1</sup> is 4-methoxy, R<sup>2</sup> is 3-ethoxy, and R<sup>3</sup> and R<sup>4</sup> are hydrogen, then R<sup>5</sup> is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and
- (vii) when R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-methoxy when R<sup>2</sup> is 2-fluoro, and R<sup>1</sup> is not 2-methoxy when R<sup>2</sup> is 4-fluoro.

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- 51. The method according to Claim 49 or 50 wherein the autoimmune disease is systemic lupus.
- 52. The method according to Claim 49 or 50 wherein the autoimmune disease is multiple sclerosis.

53. A method for treating a patient with an inflammatory disease which method comprises administering to said patient a pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective inflammatory disease-treating amount of a compound of formula I:

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$$R^{1}$$
 $R^{2}$ 
 $R^{3}$ 
 $R^{4}$ 
 $R^{5}$ 
 $R^{5}$ 

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wherein

R<sup>1</sup> is selected from the group consisting of alkoxý, alkaryloxy, alkcycloalkoxy, aryloxy, and cycloalkoxy;

R<sup>2</sup> is selected from the group consisting of hydrogen, alkoxy, alkeycloalkoxy, cycloalkoxy and halogen, or when R<sup>1</sup> and R<sup>2</sup> are attached to adjacent carbon atoms, R<sup>1</sup> and R<sup>2</sup> may be joined together to form an alkylenedioxy group;

R<sup>3</sup> is selected from the group consisting of hydrogen, alkoxy, alkcycloalkoxy, cycloalkoxy and halogen;

R<sup>4</sup> is selected from the group consisting of hydrogen and alkyl;

 $R^5$  is selected from the group consisting of alkyl having at least 3 carbon atoms, substitututed alkyl having at least 3 carbon atoms and cycloalkyl;

provided that:

- (i) when  $R^2$  and  $R^3$  are independently hydrogen or methoxy,  $R^1$  is not methoxy;
- (ii) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;
- (iii) when  $R^2$ ,  $R^3$  and  $R^4$  are hydrogen and  $R^5$  is isopropyl, then  $R^1$  is not 4-ethoxy;

- (iv) when R<sup>1</sup> and R<sup>2</sup> are joined together to form a 3,4-methylenedioxy group and R<sup>3</sup> and R<sup>4</sup> are hydrogen, then R<sup>5</sup> is not isopropyl or *tert*-butyl;
- (v) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is 1-hydroxy-2-methylprop-2-yl, then R<sup>1</sup> is not 2-ethoxy;
- (vi) when R<sup>1</sup> is 4-methoxy, R<sup>2</sup> is 3-ethoxy, and R<sup>3</sup> and R<sup>4</sup> are hydrogen, then R<sup>5</sup> is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and
- (vii) when R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-methoxy when R<sup>2</sup> is 2-fluoro, and R<sup>1</sup> is not 2-methoxy when R<sup>2</sup> is 4-fluoro.

10 54. A method for preventing the onset of an inflammatory disease in a patient at risk for developing the inflammatory disease which method comprises administering to said patient a pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective inflammatory disease-preventing amount of a compound of formula I:

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$$R^2$$
 $R^3$ 
 $R^4$ 
 $R^5$ 
 $R^5$ 

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wherein

 $R^1$  is selected from the group consisting of alkoxy, alkaryloxy, alkcycloalkoxy, aryloxy, and cycloalkoxy;

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R<sup>2</sup> is selected from the group consisting of hydrogen, alkoxy, alkcycloalkoxy, cycloalkoxy and halogen, or when R<sup>1</sup> and R<sup>2</sup> are attached to adjacent carbon atoms, R<sup>1</sup> and R<sup>2</sup> may be joined together to form an alkylenedioxy group;

R<sup>3</sup> is selected from the group consisting of hydrogen, alkoxy, alkcycloalkoxy, cycloalkoxy and halogen;

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	R <sup>4</sup> is selected from the group consisting of hydrogen and alkyl;
	R <sup>5</sup> is selected from the group consisting of alkyl having at least 3 carbon
atoms,	substitututed alkyl having at least 3 carbon atoms and cycloalkyl;
	provided that:

- (i) when R<sup>2</sup> and R<sup>3</sup> are independently hydrogen or methoxy, R<sup>1</sup> is not methoxy;
- (ii) when  $R^2$ ,  $R^3$  and  $R^4$  are hydrogen and  $R^5$  is *tert*-butyl, then  $R^1$  is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;
- (iii) when  $R^2$ ,  $R^3$  and  $R^4$  are hydrogen and  $R^5$  is isopropyl, then  $R^1$  is not 4-ethoxy;
- (iv) when  $R^1$  and  $R^2$  are joined together to form a 3,4-methylenedioxy group and  $R^3$  and  $R^4$  are hydrogen, then  $R^5$  is not isopropyl or *tert*-butyl;
- (v) when R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is 1-hydroxy-2-methylprop-2-yl, then R<sup>1</sup> is not 2-ethoxy;
- (vi) when  $R^1$  is 4-methoxy,  $R^2$  is 3-ethoxy, and  $R^3$  and  $R^4$  are hydrogen, then  $R^5$  is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and
- (vii) when R<sup>3</sup> and R<sup>4</sup> are hydrogen and R<sup>5</sup> is *tert*-butyl, then R<sup>1</sup> is not 4-methoxy when R<sup>2</sup> is 2-fluoro, and R<sup>1</sup> is not 2-methoxy when R<sup>2</sup> is 4-fluoro.
- 20 55. The method according to Claim 53 or 54 wherein the inflammatory disease is rheumatoid arthritis.
  - 56. The method according to Claim 53 or 54 wherein the inflammatory disease is septic shock.
  - 57. The method according to Claim 53 or 54 wherein the inflammatory disease is erythema nodosum leprosy.
- 58. The method according to Claim 53 or 54 wherein the inflammatory disease is septicemia.

- 59. The method according to Claim 53 or 54 wherein the inflammatory disease is uveitis.
- 60. The method according to Claim 53 or 54 wherein the inflammatory disease is adult respiratory distress syndrome.
  - 61. The method according to Claim 53 or 54 wherein the inflammatory disease is inflammatory bowel disease.